

CLAIMS:

1. A method of controlling at least one readout parameter during a reading operation from a magneto-optical recording medium (10) comprising a storage layer and a readout layer, wherein an expanded domain leading to a pulse in a reading signal is generated in said readout layer by copying of a mark region from said storage layer to said readout layer upon heating by a radiation beam having a radiation power, said method comprising the steps of:
- 5 a) analyzing a pulse pattern in said reading signal;
- b) comparing the result of said analyzing step with a runlength characteristic of the data stored in said storage layer;
- 10 c) determining a relative occurrence of runlength violations obtained from said comparing step;
- d) generating an error signal having a predetermined continuous functional relationship with said determined relative occurrence; and
- e) controlling said at least one readout parameter on the basis of said error signal.
- 15 2. A method according to claim 1, wherein said at least one readout parameter comprises at least either said radiation power or a strength of an external magnetic field applied during said reading operation, or both.
- 20 3. A method according to claim 1 or 2, wherein said predetermined functional relationship comprises a proportional relationship.
4. A method according to claim 3, wherein said proportional relationship is provided in a transition region between a non-controlled region and a controlled region.
- 25 5. A method according to claim 1 or 2, wherein said determination step comprises a calculation of a running average of detected runlength violations.

6. A method according to claim 1 or 2, wherein said determination step comprises a time-averaging or integration step.
7. A method according to claim 1, 2, 5 or 6, wherein said runlength violations are
5 determined by a pulse counting function or by a timer function.
8. A method according to claim 1 or 2, wherein said pulse pattern corresponds to the user data recorded on said recording medium (10).
- 10 9. A method according to claim 1 or 2, wherein said pulse pattern corresponds to a predetermined data pattern with pre-defined mark and space runlengths recorded on predetermined portions of said recording medium (10).
- 15 10. A method according to claim 9, wherein said generating step comprises a generation of said error signal during reading of said predetermined portions, and a freezing of said generated error signal during reading of other portions of said recording medium (10).
11. A method according to claim 10, wherein a control based on said freezed error signal is enhanced on the basis of runlength variations detected from user data recorded on
20 said other portions of said recording medium (10).
12. A method according to claim 9, 10 or 11, wherein said predetermined portion is an address header portion.
- 25 13. A method according to claim 1 or 2, wherein said comparing step is performed on the basis of a look-up Table linking the value of said error signal to a corresponding value of said relative occurrence of runlength violations.
14. A reading apparatus for controlling at least one readout parameter during a
30 reading operation from a magneto-optical recording medium (10) comprising a storage layer and a readout layer, wherein an expanded domain leading to a pulse in a reading signal is generated in said readout layer by copying of a mark region from said storage layer to said readout layer upon heating by radiation power, said apparatus comprising:
- a) analyzing means (21) for analyzing a pulse pattern in said reading signal;

- b) comparing means (22) for comparing the result of the analysis by said analyzing means (21) with a runlength characteristic of the data stored in said storage layer, determining a relative occurrence of runlength violations obtained from said comparing step, and generating an error signal having a predetermined continuous functional relationship
5 with said determined relative occurrence; and
- c) control means (25) for receiving said error signal and for controlling said at least one readout parameter on the basis of said error signal.
15. A reading apparatus according to claim 14, wherein said at least one readout
10 parameter comprises at least either said radiation power or the strength of an external magnetic field applied during said reading operation, or both.
16. A reading apparatus according to claim 14 or 15, further comprising storing
15 means (23) for storing information defining a relationship between a value of said error signal and a value of said relative occurrence.
17. An apparatus according to claim 14, 15 or 16, wherein said reading apparatus is a disk player for reading MAMMOS disks.